



# Empathy to Excel

My Adventures From Chief Crying Officer  
to Enthusiastic Data Strategist

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SD in Gov March 12, 2025



# Canadian Digital Service Service numérique canadien



Nova Scotia, Canada- Photo : Unsplash



I used to work  
at the **Nova  
Scotia Digital  
Service**  
as a service  
designer & user  
researcher.



*Photo: Not a real business card. Not my real job title either.*

**You may experience:**

**Enthusiastic Optimism ⇒  
Shocking Reality ⇒  
(x)Disillusionment**

**\*take care of yourself if you need to**

# Case Study: Education 2017



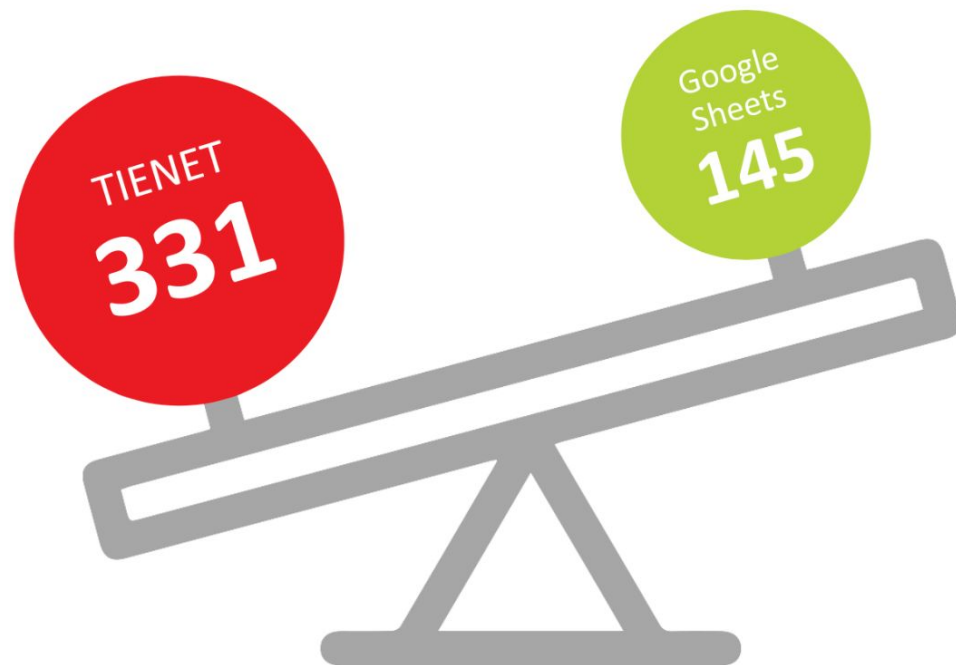
**Service designer spidey senses  
often tingle before research even  
gets going...**

**But unpopular design advice can  
still be dismissed as “opinions”...**

# Heuristic cognitive calculation results

We compared the main IPP screen in TIENET to a Google Sheet. The calculated cognitive load of TIENET was **more than double** that of Google Sheets.

*Details of this calculation can be found in Appendix B.*



**Researched with almost 70  
educators within the system.**

**Then another 50 or so  
departmental and IT staff.**

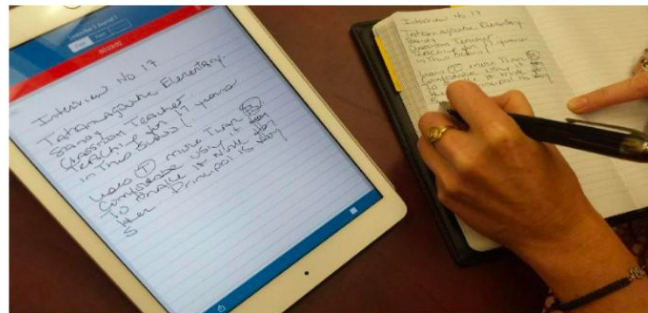
**The biggest single user research  
endeavour of my career.**

# Some numbers

We drove a total of **6,351 km**... equal to driving from Sydney to Victoria



We took **440+ pages** of notes



We have **2,200+ observations**

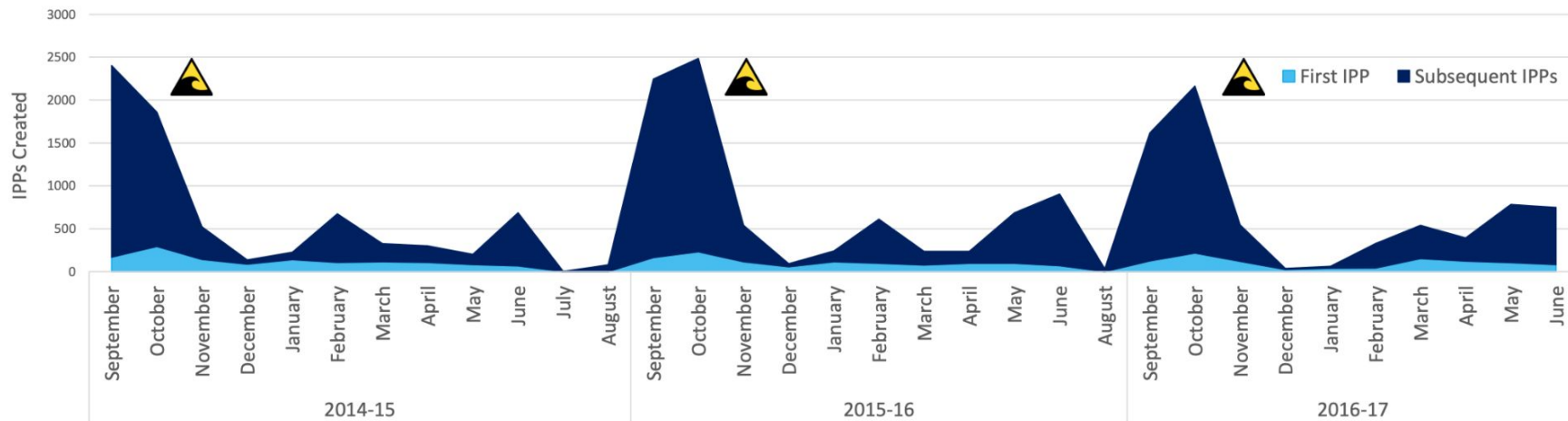
| Participant ID | Obs# | Participant | Theme (label) | Rate (type) | Tags | Observation (description)                                                                                                         | Feeling  |
|----------------|------|-------------|---------------|-------------|------|-----------------------------------------------------------------------------------------------------------------------------------|----------|
| 1              | 1    | 1           | Change        | Resource    |      | Student needs more support since beginning of term                                                                                | neutral  |
| 2              | 2    | 2           | Inclusion     | Resource    |      | More student needs from resources to support those needs                                                                          | neutral  |
| 3              | 3    | 3           | Other         | Resource    |      | Resources are split between two people to make it easier for dealing with teachers and emerging curriculum                        | neutral  |
| 4              | 4    | 4           | Other         | Resource    |      | Educational system thinks it gets more bang for their buck by using EOL for classrooms                                            | neutral  |
| 5              | 5    | 5           | Inclusion     | Resource    |      | Take PTP out of the classroom for enrichment experiences that are either their interests to learn and aligned with their outcomes | positive |
| 6              | 6    | 6           | Policy        | Resource    |      | Link being taken out of the classroom for specific learning are based on education and children's specific needs                  | neutral  |
| 7              | 7    | 7           | Inclusion     | Resource    |      | Experiences are based on education and children's specific needs                                                                  | neutral  |
| 8              | 8    | 8           | Inclusion     | Resource    |      | Educational assistants are not qualified to teach in inclusive classrooms                                                         | neutral  |
| 9              | 9    | 9           | Inclusion     | Resource    |      | GPW used to be outside the main class at times to get a specialized learning they need, not sitting in a room with a teacher      | neutral  |
| 10             | 10   | 10          | Inclusion     | Resource    |      | Not just curriculum for GPW need non academic teaching as well and small group teaching                                           | neutral  |
| 11             | 11   | 11          | Inclusion     | Resource    |      | Inclusivity means different things to different people                                                                            | neutral  |
| 12             | 12   | 12          | Inclusion     | Resource    |      | High needs all set up in one place - more work for teacher                                                                        | neutral  |
| 13             | 13   | 13          | Inclusion     | Resource    |      | Supervision of high needs in classroom and outside                                                                                | neutral  |
| 14             | 14   | 14          | Inclusion     | Resource    |      | Students with needs                                                                                                               | neutral  |

We have **4,800 mins** of audio recordings (80 hours or 11.42 working days)



*“TIENET is this great big monster  
and I only know a tiny bit about how  
to feed it...”*

# IPP workload throughout the school year



Since 2014, the **majority (55%) of all IPP documents were created in September and October**. During these months there is a significant increase in the volume of IPP documents created and the workload associated with creating these IPPs.



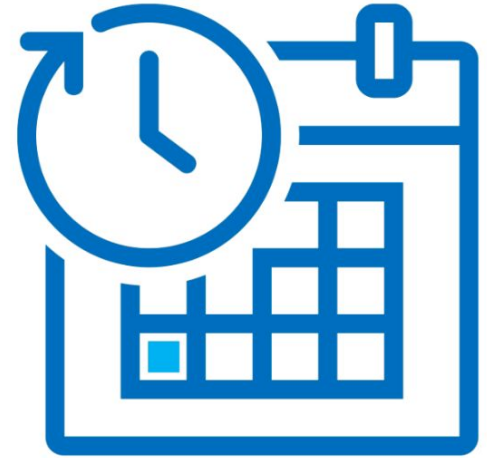
= TIENTET “Tidal Waves”

The workload associated with developing first (i.e., “brand new”) IPPs is more constant throughout the year and the volumes are significantly smaller than the IPP documents being created for students who have previously had an IPP.

# Approximate scale of IPP failure demand

**50-140 FTEs** of effort are **required** to prepare **September's IPP documents**<sup>1</sup>

- This time and effort is in addition to other responsibilities during an already busy time.
- This workload is not evenly distributed across all teachers in the system (i.e., some feel it more than others as some teachers have more IPPs to prepare with less training).
- This effort is a direct result of the practice of finalizing IPP documents in June.



<sup>1</sup> (2400 IPPs in Sept 2014) \* (estimate of 3-8 hrs/IPP) / (4 wks \* 35hr/wk per FTE in Sept)

Insight #7: Reporting is focussed on  
who is doing/recording what, not on  
the outcomes that affect kids.

**SPOILER: Software was the symptom.**

**We were really uncovering complex challenges at the very heart of inclusive classroom policy. 🥲**

*“It’s not the technology...  
It’s not human resources...  
It’s our entire system...”*

## Education minister welcomes inclusion report, warns change could take time

Report says new spending could reach \$80M annually, recommends more specialists in schools

Michael Gorman · CBC News · Posted: Mar 26, 2018 11:39 AM ADT | Last Updated: March 26, 2018



The inclusion policy requires the province to make sure students with special needs are given support to succeed in a regular classroom setting. (Robert Short/CBC)

## EPILOGUE:

We were asked to expand our research and report back to a Commission on Inclusive Education.

I spent another month with students and parents and wrote a 28 page submission for the Commission.

**Not my first brush with burnout...**  
**nor the last...**

<https://firebethfox.medium.com/what-im-learning-while-recovering-from-burnout-be8906a71e4a>

**The pipeline is real:**

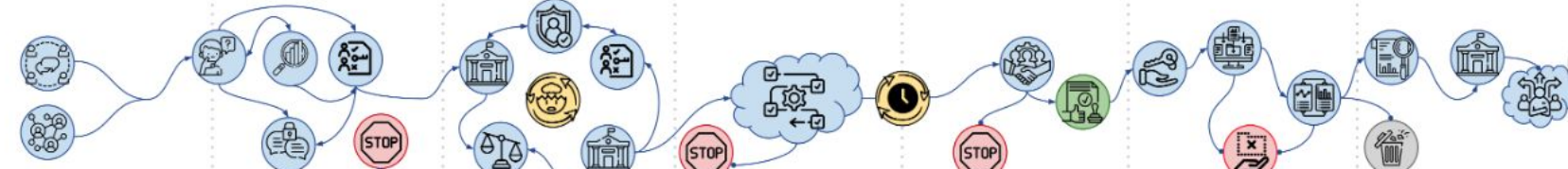
**Empathetic Helper ⇒**

**Public Servant Changemaker ⇒**

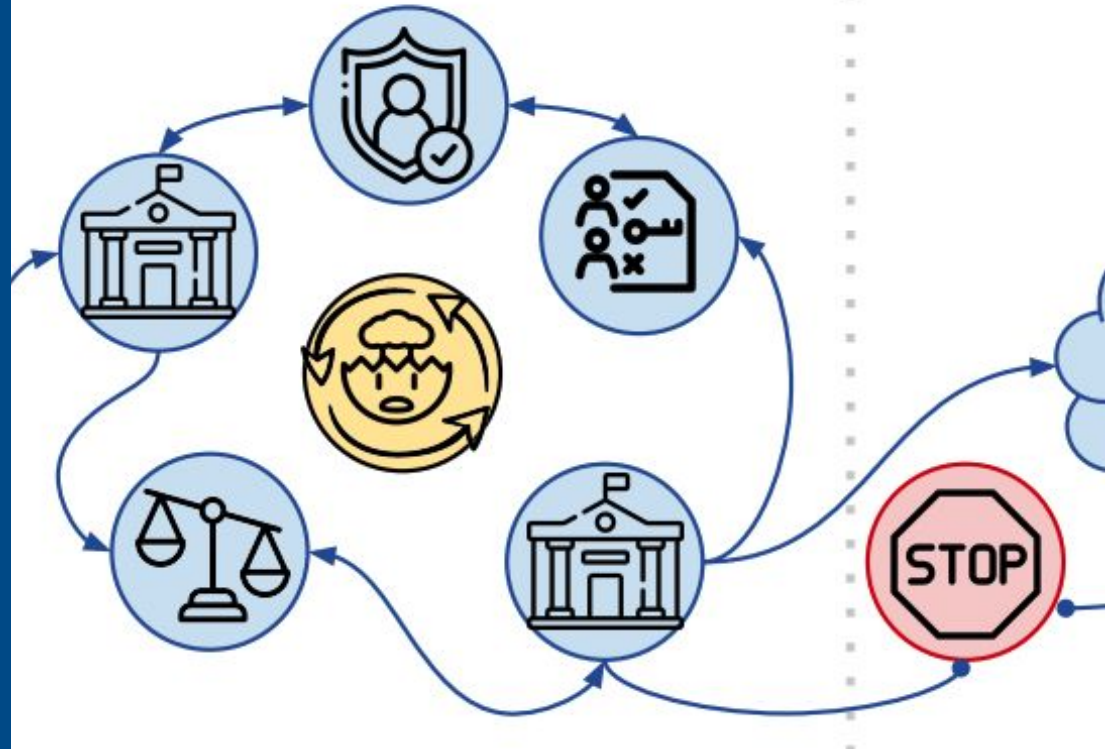
**Burnout**

# Case Study: Data Sharing 2022

## Data Sharing Agreements: current state journey

| Step                                   | Identify the need                                                                                                                                                                                                                                                                       | Identify Data Sources                                                                                                                                                                                                                                                                                                     | Checks/Reviews                                                                                                                                                                                                                                                                                                | Required Governance                                                                                                                                                                                                                                                                                                             | Briefing / Approval                                                                                                                                                                                                                                                      | Analysis                                                                                                                                                                                                                                                                          | Findings                                                                                                                                                                                                                                                         |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Success Criteria                       |  <b>Confirm a shared interest/support. Clear question or problem defined.</b>                                                                                                                          |  <b>Identify the data sources and custodian(s).</b>                                                                                                                                                                                      |  <b>Clarity about the authorities and end state.</b>                                                                                                                                                                         |  <b>Upfront clarity on who approves what.</b>                                                                                                                                                                                                  |  <b>Clear understanding that governance/ processes were followed.</b>                                                                                                                 |  <b>Data is accessible and fit for purpose.</b>                                                                                                                                                |  <b>Better information for decision making is provided.</b>                                                                                                                   |
| What activities happen at each step?   | <ul style="list-style-type: none"> <li>Meeting between 2+ depts to explore issue / request</li> <li>Identify desired outcome(s)</li> <li>Consult with Privacy</li> <li>check for existing data capacity / skills</li> </ul>                                                             | <ul style="list-style-type: none"> <li>Identify individual data sources</li> <li>Identify contact person for each data source</li> <li>Explore criteria for approval</li> </ul>                                                                                                                                           | <ul style="list-style-type: none"> <li>Draft data sharing agreement</li> <li>Send to Privacy Review Officers</li> <li>Send to Legal solicitors</li> <li>Send to ind. Data owners for review?</li> </ul>                                                                                                       | <ul style="list-style-type: none"> <li>Varies department by department</li> <li>Varies by individual data set (e.g., Justice dataset require approval from judiciary / Cabinet submission)</li> </ul>                                                                                                                           | <ul style="list-style-type: none"> <li>Completed data sharing agreement with signoff from privacy, legal included</li> <li>Individual departmental briefing up to Deputy level.</li> </ul>                                                                               | <ul style="list-style-type: none"> <li>Data sets are compared for the 1st time</li> <li>Assessment for quality, fit and linking</li> <li>Can data answer question?</li> <li>Complete analysis</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>Policy processes take data into a separate process.</li> <li>Depending on the agreement, it's likely that the data outputs are destroyed.</li> </ul>                                                                      |
| What the journey looks and feels like. |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                  |
| Notable Experience Pain Points         | <p>While enthusiasm may be high, there are a lot of unknowns in early conversations.</p> <p>There is no visibility on previous (similar) agreements that could potentially reduce duplication of efforts.</p> <p>The question asked are largely shaped by the availability of data.</p> | <p>Visibility on what data exists is unclear within and across departments.</p> <p>Unable to confirm data fit and quality prior to approvals.</p> <p>If the question is "exploratory" in nature (data modeling), we have almost no legal authority to use PII without a clear link to the operational requirements to</p> | <p>Not all teams have the skills and expertise to handle potentially sensitive information which stalls confidence in the effort.</p> <p>Legal / privacy processes in departments vary and often happen independently in parallel series.</p> <p>The lack of multidisciplinary approach results in longer</p> | <p>Between other government departments, data governance is ad-hoc and depends on "risk" tolerance.</p> <p>Legal frameworks are complex and sometimes in conflict leaving it unclear how to prioritize risks/decisions</p> <p>Current legislation (FOIPOP) is antithetical to the kind of data sharing that complex problem</p> | <p>If Deputy (or higher) approval is required, additional time is spent waiting for access to those briefing and approval opportunities.</p> <p>The confidence of senior officials to sign off may vary depending on risk or previous experiences with data sharing.</p> | <p>If data quality (such as lack of consistent identifiers, or incompleteness) is discovered at this point the question cannot be answered.</p> <p>If the question or the method changes as a result of early analysis, the agreement effort needs to effectively start over.</p> | <p>The destruction of data sets at the conclusion of an agreement means the previous learnings are not repeatable.</p> <p>For potential reuse, open data, etc. the criteria and approval processes are entirely separate from the sharing agreement process.</p> |

If it's this hard  
to connect data,  
how can we get  
anything  
meaningful  
done?



Current Effort:

GC Digital Service Landscape

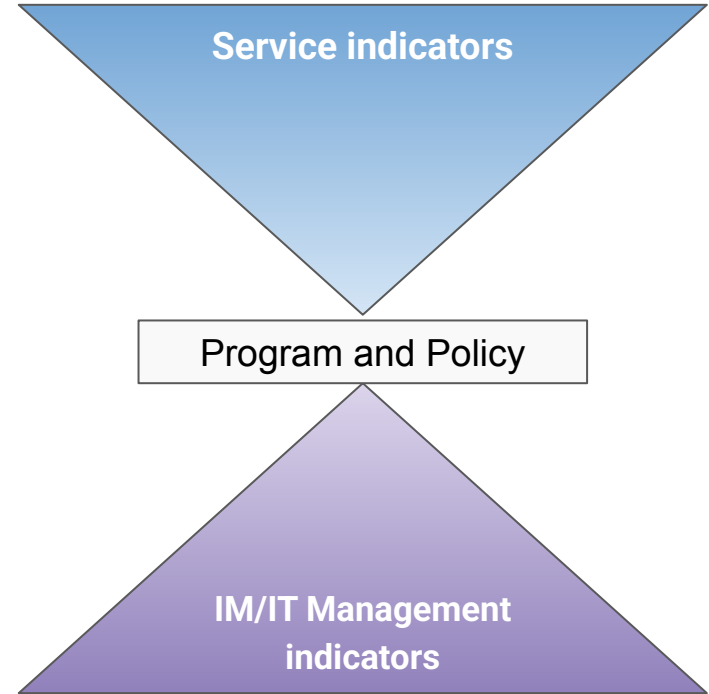
# End-to-end and Front-to-back Digital Service Delivery Data

**Program owners face barriers that can sometimes be invisible within the system.**

Service data is **fragmented between channels** and there's often not a clear picture of the end-to-end of a service journey within the data.

IT and enabling project data is managed separately, and is often **disconnected from the services** that it underpins.

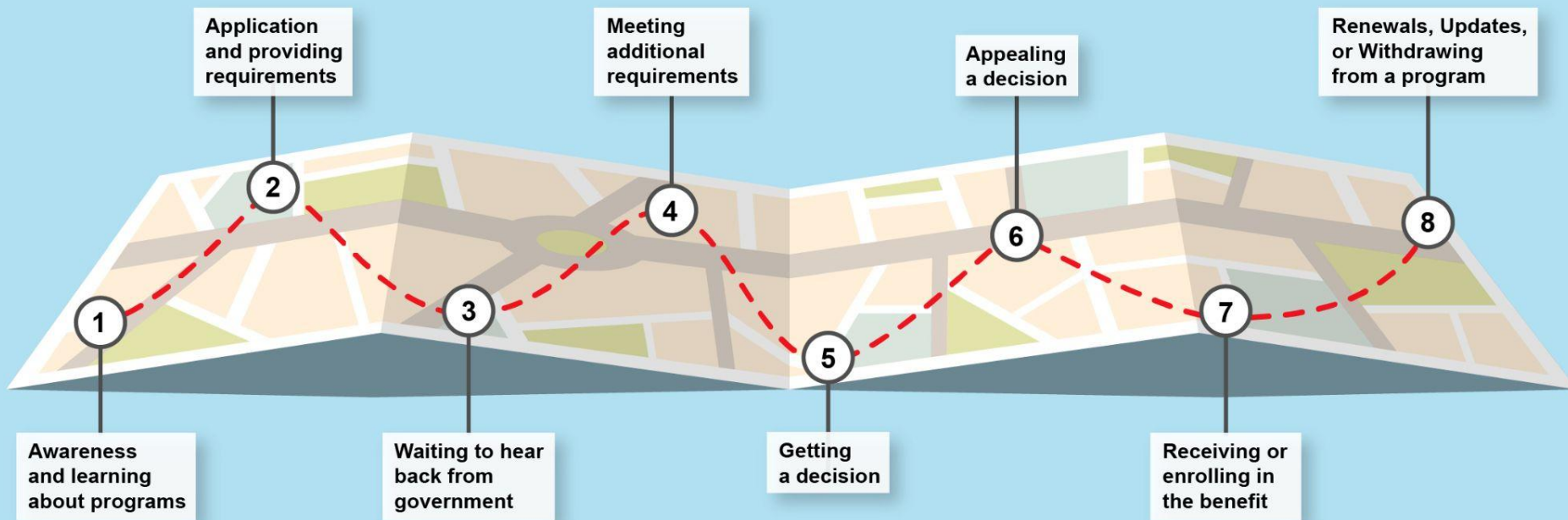
Both of these kinds of data are **often filtered if not invisible** to the policy teams. This puts **program at arms length** and in an awkward position to understand barriers or influence improvements.



**Data about digital service delivery and  
it's underlying enablers is  
everywhere...**

**...and nowhere**

# End-to-end digital service journey



<https://digital.canada.ca/2025/01/15/digital-service-delivery-end-to-end-and-front-to-back-part-1/>

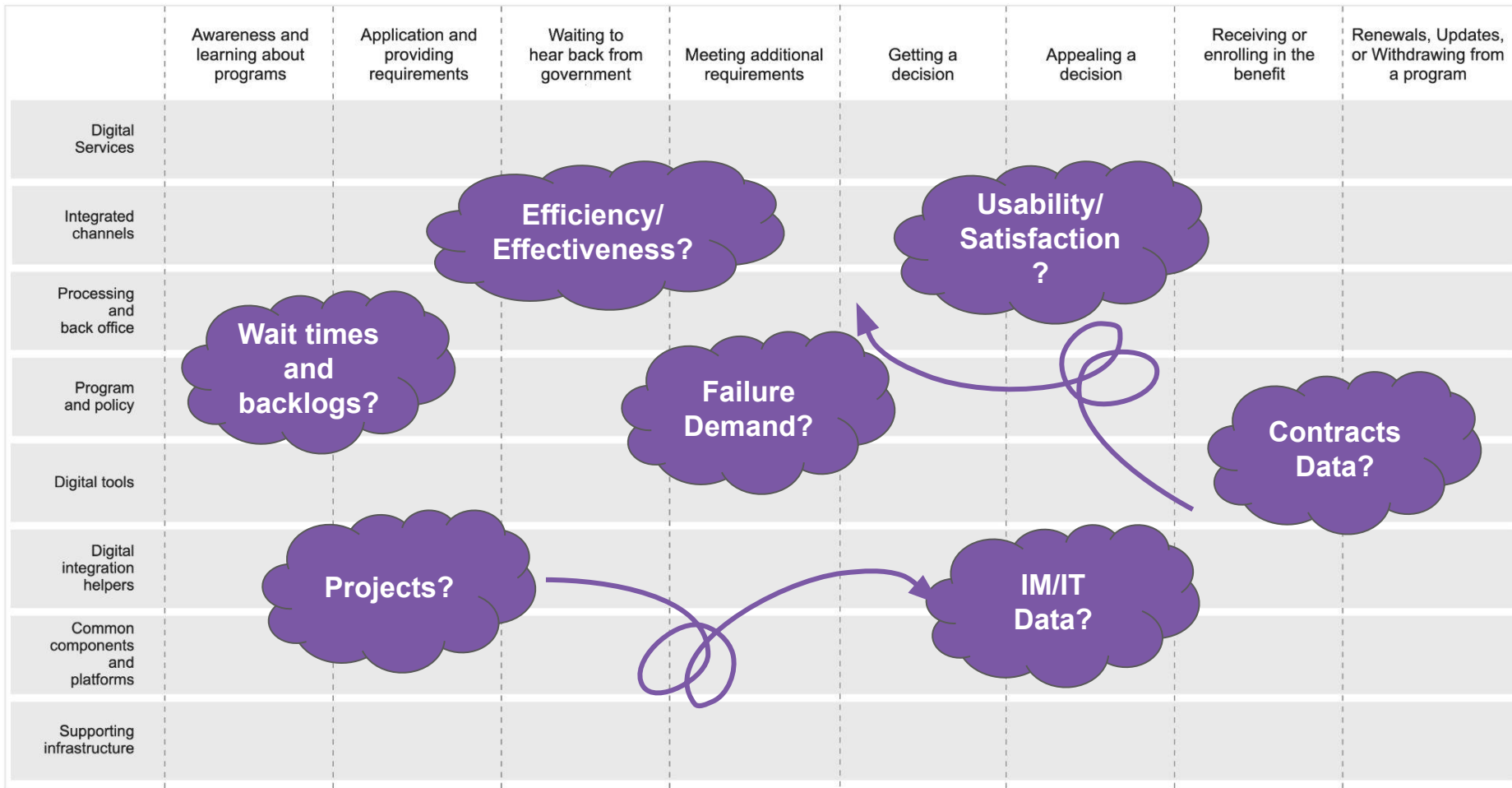
## Front-to-back Iceberg of service delivery



## There's nothing new or groundbreaking here?

We're attempting to create a simplified framework so that we can more accurately describe the required orchestration within this end-to-end and front-to-back view.

<https://digital.canada.ca/2025/01/16/digital-service-delivery-end-to-end-and-front-to-back-part-2/>



**Many critical boundaries are defined by arbitrary distinctions between various domains.**

# Concept: Outcomes across the End-to-end and Front-to-back

|                                 |                                                                                                                                                                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital Services                | <ul style="list-style-type: none"><li>● Information about user experience is <b>joined</b>, regardless of the journey, or the channel.</li></ul>                                                                                                                                                                     |
| Integrated channels             | <ul style="list-style-type: none"><li>● Failure demand is <b>easier to prevent, spot, and mitigate</b>.</li><li>● <b>The path</b> to creating good digital services <b>is understood</b> by programs and supported by tools and enablers that support integrated and barrier free services as the default.</li></ul> |
| Processing and back office      | <ul style="list-style-type: none"><li>● Public servants are able to make improvements to services <b>without always requiring</b> third party services to respond to change.</li></ul>                                                                                                                               |
| Program and policy              | <ul style="list-style-type: none"><li>● Program teams have <b>line-of-sight to the indicators</b> of their services. This includes human centered and <b>effective and efficient delivery indicators</b>.</li></ul>                                                                                                  |
| Digital tools                   | <ul style="list-style-type: none"><li>● Teams are able to respond effectively to change <b>without regularly needing additional funding or procurement</b> to sustain their services.</li></ul>                                                                                                                      |
| Digital integration helpers     | <ul style="list-style-type: none"><li>● Platforms <b>reduce the complexity</b> by providing <b>consistent and trusted</b> experience.</li><li>● Services can <b>easily change</b> or migrate to alternate providers for common components.</li></ul>                                                                 |
| Common components and platforms | <ul style="list-style-type: none"><li>● There is a variety of <b>fit-for-purpose</b> infrastructure that meets security, privacy, and accessibility requirements.</li></ul>                                                                                                                                          |
| Supporting infrastructure       |                                                                                                                                                                                                                                                                                                                      |

StarTalk

**PUT 'EM TOGETHER**

# Service Design + Data = ✨Magic✨

## Complementary Practices

1. Research helps cut through the noise so data can be used for **meaningful indicators**
2. Pattern recognition can help **find structures for more qualitative types of data** such as archetypes, taxonomies, and tags
3. **Shifting** discussions **away from opinions**

## Common Challenges

1. The general **overestimation** of just how connected things are
2. Disrupting the status quo is **not for the faint of heart**

**The hard yards of changemaking is  
one of my most persistent variables...**

**But burnout doesn't have to be.**

**“Your best is what you can do *without* harming your physical or mental health.**

**Not what you can accomplish when you disregard it”**

**~@suegainz**

So how does one take care of yourself in all this?



## **LESSON 1:**

**Busting silos doesn't mean all boundaries are a bad thing.**

**Empathy != your responsibility**

## **LESSON 2:**

**Zooming out requires the discipline to remember to zoom back in.**

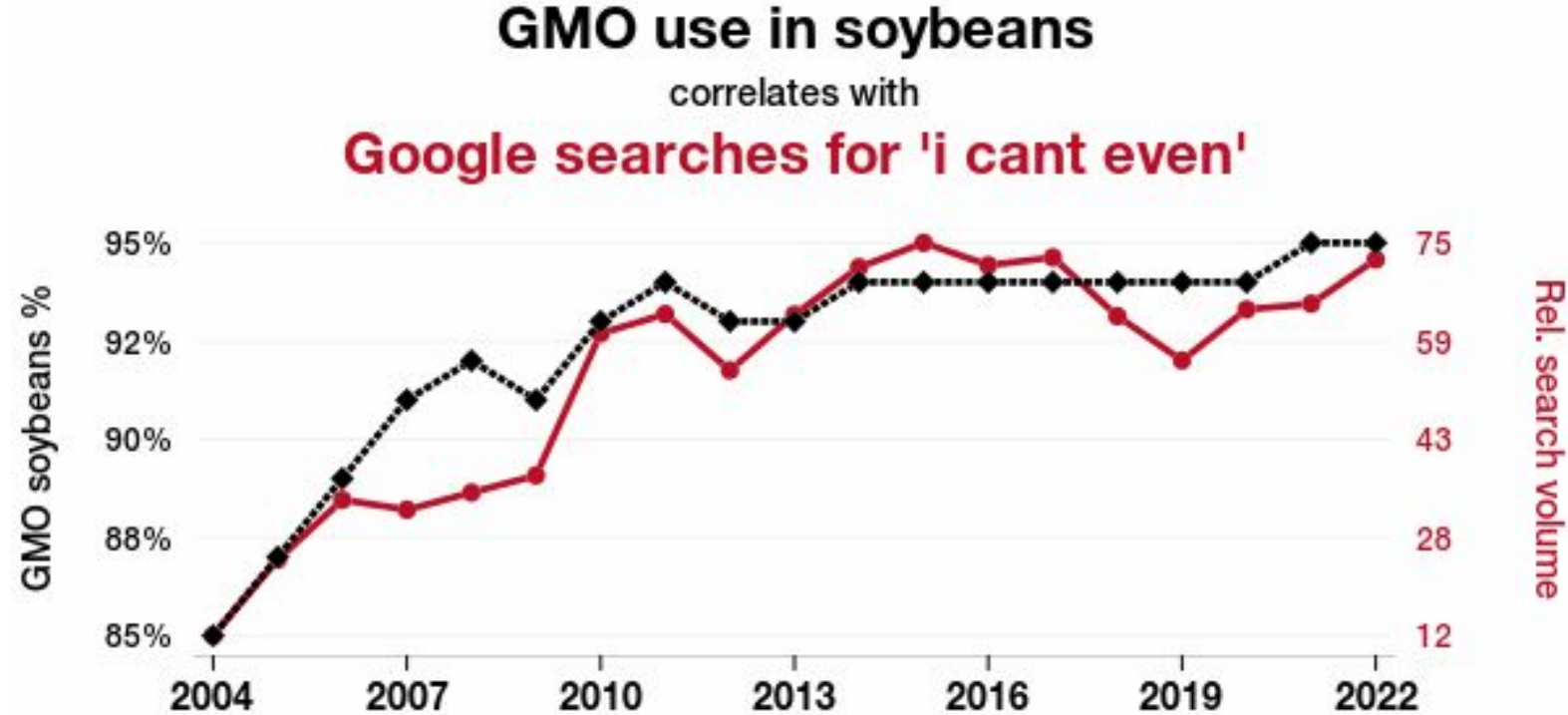
**Line-of-sight != your responsibility**

## **LESSON 3:**

**Feelings are also just data points. Use them accordingly.**

**Feeling != “fixing”**

# Feelings are data - But beware the Spurious Correlation

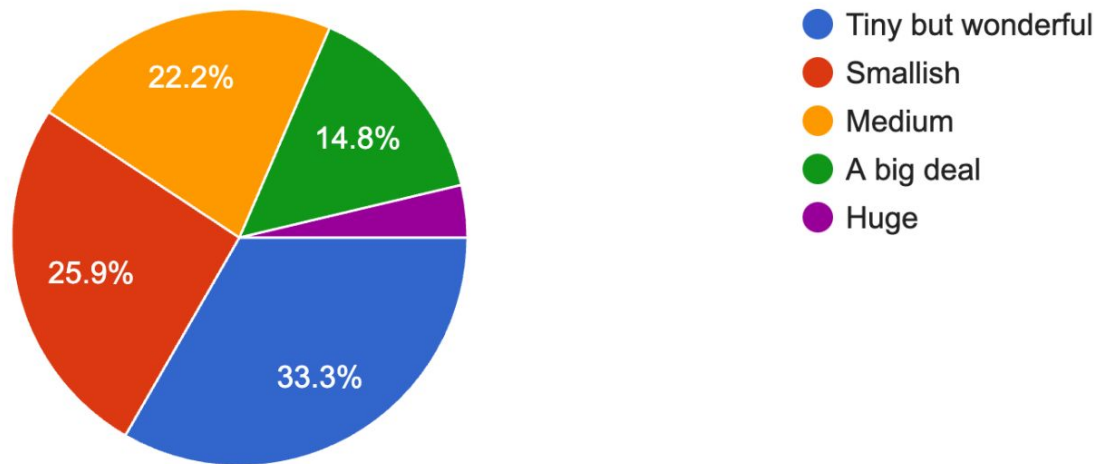


<https://tylervigen.com/spurious-correlations>

# Feelings are data - Holding on to Joy 2024

How big of a thing was this?

27 responses



## **LESSON 4:**

**All of this is a team sport.**

**Actually it's an ultra marathon...  
that's also a relay.**

**You are worthy of rest.**

# Proposed 2025 Pipeline:

Radiating intent ⇒

Collective impact ⇒

Rest when needed ⇒

✨ Glimmers ✨



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Manager, Strategic Data and  
Reporting

## Get in touch:



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